

# ABANDONED MINE LAND RECLAMATION

## ELIMINATING HEALTH AND SAFETY PROBLEMS

Title IV of the Surface Mining Law establishes the Abandoned Mine Land Reclamation Program, which provides for the restoration of lands mined and abandoned or left inadequately restored before August 3, 1977. The program is implemented through an emergency program (for sudden problems presenting a high probability of substantial harm to the health, safety, or general welfare of people before the danger can be abated under the normal program operating procedures) and a non-emergency program. States and tribes with approved programs carry out these responsibilities using grants administered by the Office of Surface Mining

ground, and 10 cents per ton for lignite coal. The fees are deposited in the Abandoned Mine Reclamation Fund, which is used to pay the costs of abandoned mine land reclamation projects. From January 30, 1978, when the first fees were paid, through September 30, 2005, the fee collections totaled \$7,445,240,695. For the same period, appropriations from the Fund totaled \$5,748,548,370.

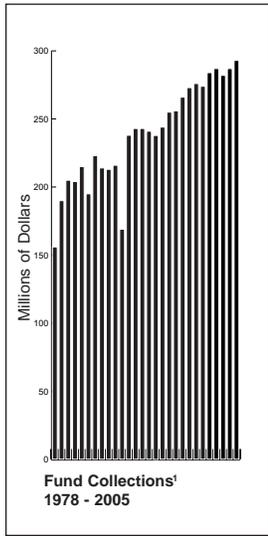
### Reauthorization

Under the provisions of the Surface Mining Law, the authority to collect abandoned mine land fees was limited in

time. This authority has been extended by law seven times, including the most recent extension in the Interior Department's 2006 appropriations. As of September 30, 2005, the fee collection authority was slated to expire on June 30, 2006.

Despite remarkable achievements in the past 28 years, the job of remediating abandoned mine land-related hazards and problems is far from complete. Almost \$3 billion worth of health and safety coal-related abandoned sites remain in the Office of Surface Mining's inventory of hazardous sites, as well as

### Abandoned Mine Reclamation Fund



The program is funded from the collection of fees from active mining operations. Since 1978, fees have been assessed at the rate of 35 cents per ton of surface mined coal, 15

cents per ton for coal mined under-

At this Kentucky reclaimed mine site the rock-lined drain adjacent to the hollow fill directs surface water off the fill and into the permanent impoundment at the base of the structure.



**Table 1  
Abandoned Mine Lands Fee Collections and Funding<sup>1</sup>**

State/Tribe	AML Collections	State Share Distribution <sup>2</sup>	Federal Share Distribution <sup>2</sup>	Emergency Distribution <sup>2</sup>	Clean Streams Distribution <sup>2</sup>	Total Distribution <sup>2</sup>
Alabama	\$5,007,448	\$1,208,413	\$1,548,031	\$400,000	\$164,648	\$3,321,092
Alaska	601,108	137,600	1,362,400	25,000	0	1,525,000
Arkansas	49,403	646	1,499,354	15,000	0	1,515,000
Colorado	7,858,492	1,734,291	754,431	0	0	2,488,722
Illinois	5,721,417	2,029,335	5,734,908	800,000	339,499	8,903,742
Indiana	8,110,871	2,909,916	1,867,106	320,000	177,973	5,274,995
Iowa	0	2,262	1,497,738	60,000	118,931	1,678,931
Kansas	51,862	27,521	1,472,479	450,000	0	1,950,000
Kentucky	26,216,272	8,690,962	5,620,573	0	334,724	14,646,259
Louisiana	399,420	97,212	0	0	0	97,212
Maryland	1,260,905	246,230	1,253,770	0	115,210	1,615,210
Mississippi	189,265		0	0	0	0
Missouri	364,933	66,116	1,433,884	50,000	0	1,550,000
Montana	11,893,651	3,234,974	0	125,000	0	3,359,974
New Mexico	3,088,877	1,440,891	183,412	0	0	1,624,303
North Dakota	2,940,160	853,044	646,956	100,000	0	1,600,000
Ohio	5,210,048	1,675,751	3,515,573	2,300,000	246,816	7,738,140
Oklahoma	482,213	149,238	1,350,762	105,000	111,038	1,716,038
Pennsylvania	12,690,819	4,038,538	18,538,069	0	874,180	23,450,787
Tennessee	884,351		0	0	0	0
Texas	4,652,947	1,398,654	0	0	0	1,398,654
Utah	3,448,634	1,014,495	502,652	0	0	1,517,147
Virginia	6,007,689	1,882,197	1,725,130	1,850,000	172,044	5,629,371
Washington	1,906,147		0	0	0	0
West Virginia	32,836,697	8,977,678	10,654,214	1,808,355	544,937	21,985,184
Wyoming	139,976,994	29,870,288	0	0	0	29,870,288
Crow Tribe	2,254,198	530,907	0	0	0	530,907
Hopi Tribe	1,682,801	378,846	0	0	0	378,846
Navajo Tribe	7,816,608	2,156,869	0	0	0	2,156,869
<b>Total</b>	<b>\$293,604,230</b>	<b>\$74,752,874</b>	<b>\$61,161,442</b>	<b>\$8,408,355</b>	<b>\$3,200,000</b>	<b>\$147,522,671</b>

1. These statistics are "Cash Basis" referring to the recognition of revenue when it is received. Fee collections are reported using cash basis criteria, and Abandoned mine land revenue in 2005 financial statements may include other amounts.  
 2. The term "Distribution" is now used instead of "Allocation". Allocation refers to the "pooling" of monies collected for the Fund. State and federal share distribution amounts are based on formulas and parameters provided annually by the Assistant Director, Program Support. The emergency program distribution amounts are based on estimates provided by the states and approved by the Director.

another \$3.6 billion worth of identified high priority coal problems affecting the general welfare of individuals in the coalfields and numerous environmental coal-related problems. These are not "ugly landscapes" that need to be made more attractive; they are serious, life-threatening, high priority coal mine hazards that originate from mines abandoned before passage of the Surface Mining Law in 1977. A 2003 study completed by the Office of Surface Mining estimated that 3.5 million Americans live less than one mile from health and safety hazards created by

abandoned coal mines. It is clear that fee collections for the purpose of abandoned mine land reclamation must be reauthorized to abate the hazards and eliminate these historic problems from the Nation's coalfields.

The Bush Administration has been working diligently on taking the steps necessary to finish the job Congress gave the Office of Surface Mining in 1977. In his 2004 budget, President Bush called for reauthorization of the Office of Surface Mining's authority to collect the fees that make up the Abandoned Mine

Reclamation Fund. As a result, the Office of Surface Mining established a dialogue with many of the people that have an interest in how the abandoned mine land fee is reauthorized. The goal of these discussions was to get stakeholders thinking about what has changed since the program was started more than 28 years ago and how to restructure the program to finish the job.



Through review and analysis of the Abandoned Mine Land Program as well as discussions with government officials, members of Congress, industry representatives, and citizen advocates, the Office of Surface Mining came to the conclusion that, while significant achievements have been made in reclaiming mine sites abandoned prior to the enactment of the Surface Mining Law, various factors have changed considerably since 1977, creating a fundamental imbalance in the way funds for the Abandoned Mine Land Program are allocated. It became clear that the ability of the Abandoned Mine Land Program to meet its primary objective of abating abandoned mine problems on a priority basis is being hindered by a statutory allocation formula that results in a progressive distribution of resources away from the most serious abandoned mine land problems.

The Surface Mining Law allocates abandoned mine land fee revenues into several accounts within the Abandoned Mine Reclamation Fund. Expenditures

from these accounts are subject to Congressional appropriation. Fifty percent of the fees collected from current coal production in each state is allocated to an account established for that state. Likewise, 50 percent of the fees collected from current coal production on Indian lands is allocated to an account established for the tribe having jurisdiction over those lands. The funds in these individual “state share” and “tribal share” accounts can only be used to provide abandoned mine land grants to the state or tribe for which the account is established. The state or tribe must generally follow the priorities established by the Surface Mining Law in making spending decisions, concentrating first on abandoned mine land sites that pose a significant risk to human health, safety, or the general welfare, then on environmental problems. Once a state or tribe certifies that it has completed remediation of all coal related sites, it is free to spend its state share money on other authorized projects such as public facilities for areas adversely affected by

During a 30-year period, over 1,800 acres were mined and reclaimed at this Colorado site. Native shrubs have been a high priority for the reclamation, and almost 150,000 were planted in the last 10 years. The high survival rate can be attributed to using local seed and very effective planting and management practices.

coal mining practices. Table 1 shows 2005 collections and funding by states.

Twenty percent of the total Abandoned Mine Reclamation Fund income is allocated to the “historical production” account. Funds in this account must be used to provide abandoned mine land grants to the states and tribes. Each eligible state and tribe is entitled to a percentage of the annual outlays from this account in an amount equal to its percentage of the nation’s total historical coal production—that is, coal produced prior to 1977. Thus, the proportional entitlement for each state or tribe from this account is fixed. As is the case with state share money, each state or tribe must follow the priorities established in the Surface Mining Law in making spending decisions using money from the historical production account.

However, unlike the allocation of state share money, once the state or tribe certifies that all eligible coal related reclamation has been completed, it is no longer entitled to further allocations from the historical production account. For the most part, the Office of Surface Mining finds a direct correlation between the severity of abandoned mine land problems in a state and the amount of coal that was removed before the enactment of the Surface Mining Law. Thus, by distributing funds according to historical coal production, we are getting more funds to those states that have the most high-priority problems.

Ten percent of the total Abandoned Mine Reclamation Fund income is allocated to an account for use by the Department of Agriculture for administration and operation of its Rural Abandoned Mine Program. The remaining 20 percent of the total Abandoned Mine Land Reclamation Fund income is allocated to cover federal

## Office of Surface Mining

operations including the federal Emergency Program, the federal High-Priority Program, the Clean Streams Program, the Fee Compliance Program, the Small Operator Assistance Program, and overall program administrative costs.

In the early years of the Abandoned Mine Land Program, fee income was generally aligned with the magnitude of abandoned mine Land problems-75 percent of the income came from the East, where 94 percent of the abandoned mine land problems existed, and 25 percent of the income came from the West, where 6 percent of the abandoned mine land problems existed. Correspondingly, the state share portion of the grants was generally being distributed in amounts roughly proportional to the abandoned mine land problem, much like the historical production portion of the grants. A great deal of abandoned mine land coal reclamation occurred during those early years of the program.

Over the past 28 years, coal production and fee collections have shifted away from areas with high historical production and into the areas where there are fewer or no remaining abandoned mine land problems. Because 71 percent of the total grant dollars is based on current production, there has been a corresponding shift of abandoned mine land resources away from the areas with the most significant problems. From the program's inception in 1977 through 1993, about 99 percent of the state grant dollars went to reclaim abandoned coal mine sites. Ninety five percent of that money was used for high-priority abandoned mine land reclamation. From 1994 through 2002, as current production shifted to regions with fewer abandoned mine land problems, only 71 percent of the state grant dollars went to reclaim abandoned

It's easy to question if this farm was ever a coal mine. At this Kentucky site the operator mined and reclaimed this small farm and within a short time it was returned to the premining land use without any environmental impact. Today, reclamation such as this is becoming common practice -- a distinct difference from the years before the Surface Mining Law was passed.

coal mine sites, and only 64 percent was used for high-priority abandoned mine land reclamation. This trend will continue as more states complete their high priority abandoned mine land reclamation work and then work on low priority sites and other authorized projects, while some states are still decades away from completing reclamation of the most critical high-priority sites. Not only must the fee be extended if the Office of Surface Mining and the states have any hope of completing the job the allocation formula must be changed if the job is to be completed in an efficient and effective manner.

Thus, through reauthorization, the Office of Surface Mining is attempting to accomplish the following goals:

- Expedite the cleanup of high priority health and safety related abandoned coal mines;
- Provide for the expedited payment of unappropriated balances to certified States and Tribes;

- Accomplish these goals within the President's mandatory and discretionary spending limits.

To honor these principles and finish the job, legislation must strike a balance that addresses both the ongoing problems faced by states with high priority coal-related health and safety issues while not placing at a disadvantage those states and tribes where the majority of fees are currently generated.

In 2004, an administration supported bill was introduced in both the House and Senate that would have provided an effective and cost-efficient solution to the abandoned mine land problem. Several other bills which encompassed the Administration's fundamental goals while differing in the methods to achieve those goals were also introduced. Hearings on the various bills were held in both the House and Senate but none of the bills moved out of their respective committees.





Congress extended OSM's fee collection authority as it continued to debate the issues and various proposed solutions, a clear indication of the importance Congress places on the AML program.

In anticipation of legislation that would support the Administration's goals, the Office of Surface Mining requested a record \$58 million increase for grants in the 2006 President's budget. OSM did not submit new legislation this year, choosing instead to be an advocate for extension and to work with Congress and within the Administration for fee renewal and reform.

As OSM's leaders the events of 2004, it became clear that there were several issues Congress would need to resolve in order to gain a consensus, including:

- The United Mine Workers of America Combined Benefit Fund and other health care agreements including the 1992 and 1993 agreements between the United Mine Workers and the Coal Industry;

- Mandatory spending;
- Allocation of future collections, particularly allocations to state and tribal shares;
- How to pay for increased costs beyond the scope of the current legislation; and
- Amount of fees

As an advocate for fee renewal and reform, the Office of Surface Mining has tried to broker consensus on these differences. Several bills which reflect much of the reform policy that has been sought have been introduced in 2005, and the differences may be coming together.

When a final pit was being reclaimed as a pond, engineers designed a 30-acre two-tier flood plain that provides both flood storage and a forested wetland. The upper tier, 18 acres in size, has a slight slope that drains into the pond. Its water source is overland flow from precipitation that drains from adjacent land. The lower tier is 12 acres in size and is flat. It provides storage for the periodic flooding of the pond and is a wetland habitat similar to bottomland found through this part of Texas.

Machine planting of containerized seedlings resulted in a 77 percent survival rate and a dense stand of trees and shrubs. Today, established wetlands oaks, pecan, sweetgum, and water hickory cover the depressions and wet areas. This innovative reclamation practice has resulted in a site that looks as natural as the native wetlands.

Senator Rockefeller introduced S 961 and Senator Thomas introduced S 1701, and Representative Peterson introduced HR2721, and Representatives Cubin and Rahall introduced HR 1600. On September 27, 2005, the Committee on Energy and Natural Resources held a hearing on the Rockefeller and Thomas bills; however none of the bills made it out of committee as of September 30, 2005.

**United Mine Workers of America Combined Benefit Fund**

Beginning in 1996, under a requirement of the Energy Policy Act of 1992 (Public Law 102-486), the Office of Surface Mining began an annual transfer in an amount equal to the interest earned on the Abandoned Mine Reclamation Fund to the United Mine Workers of America Combined Benefit Fund. This cash transfer is used to defray anticipated health care costs for eligible union coal

**Table 2  
Abandoned Mine Land  
Reclamation Fund Status**

	2005	2004
Balance, Start of Year	\$2,043,080,117	\$1,927,410,405
Fees, debts, and interest collected	293,604,230	287,023,400
Interest earned on investments	75,016,987	45,694,566
<b>Total Earnings</b>	<b>368,621,217</b>	<b>\$332,717,966</b>
Disbursements	211,198,604	202,081,325
Transfers to the United Mine Workers	66,533,254	14,966,929
<b>Total Disbursements and Transfers</b>	<b>277,731,858</b>	<b>217,048,254</b>
<b>Balance, End of the Year</b>	<b>\$2,133,969,476</b>	<b>\$2,043,080,117</b>

**Table 3  
Abandoned Mine Land Grants<sup>1</sup>**

State/Tribe	Subsidence Insurance	10% Program Set-Aside	Administration <sup>3</sup>	Project Costs <sup>4</sup>	Emergency <sup>5</sup>	2005 Total	2004 Total	Program Staff <sup>6</sup>
Alabama	\$0	\$0	\$620,897	\$2,483,907	\$400,000	\$3,504,804	\$3,615,616	18.15
Alaska	0	0	351,324	1,149,295	25,000	1,525,619	1,525,000	5.67
Arkansas	0	0	412,632	1,118,703	15,000	1,546,335	1,515,000	6.90
Colorado	0	0	630,000	1,785,000	0	2,415,000	2,731,777	14.00
Illinois	0	808,463	1,350,508	6,265,153	800,000	9,224,124	9,796,401	26.00
Indiana	0	488,572	1,235,480	3,480,485	320,000	5,524,537	5,745,506	21.00
Iowa	0	0	218,283	1,442,665	60,000	1,720,949	1,760,749	4.10
Kansas	0	0	293,019	1,298,332	610,000	2,201,351	2,134,328	9.95
Kentucky	0	0	1,916,109	13,057,910	0	14,974,019	16,625,563	83.00
Louisiana	0	0	97,400	0	0	97,400	148,905	0.60
Maryland <sup>2</sup>	0	258,000	445,920	715,210	0	1,419,130	2,398,052	3.45
Missouri	0	0	560,006	59,022	50,000	669,028	688,162	6.10
Montana	0	0	533,641	2,854,357	125,000	3,512,998	3,681,449	8.85
New Mexico	0	163,742	908,821	920,826	0	1,993,389	4,694,246	8.50
North Dakota	0	0	191,931	1,328,225	100,000	1,620,156	1,629,220	4.88
Ohio <sup>2</sup>	0	553,380	1,198,099	4,432,828	2,841,000	9,025,307	9,647,670	33.31
Oklahoma	0	0	298,435	1,318,180	340,000	1,956,615	1,752,613	9.00
Pennsylvania <sup>2</sup>	0	2,360,697	3,128,076	39,780,590	0	45,269,363	43,731,703	111.00
Texas	0	0	131,015	1,270,466	0	1,401,481	3,006,445	8.00
Utah	0	0	435,383	1,532,662	0	1,968,045	2,226,781	11.00
Virginia	0	332,725	570,091	3,078,528	1,850,000	5,831,344	6,322,496	15.00
West Virginia <sup>2</sup>	0	500,000	4,710,873	15,958,863	5,000,000	26,169,736	33,340,900	59.60
Wyoming	31,131	2,992,630	1,236,375	33,804,519	0	38,064,655	37,371,461	14.90
Crow Tribe	0	0	91,703	483,706	0	575,409	571,124	3.55
Hopi Tribe	0	0	603,577	51,860	0	655,437	200,000	4.40
Navajo Tribe	0	0	887,732	2,225,017	0	3,112,749	4,044,524	22.50
<b>Total</b>	<b>\$31,131</b>	<b>\$8,458,209</b>	<b>\$23,057,331</b>	<b>\$141,896,309</b>	<b>\$12,536,000</b>	<b>\$185,978,980</b>	<b>\$200,905,691</b>	<b>517.41</b>

1. Funding for these grants is derived from the 2005 distribution and funds recovered or carried over from previous years. Downward adjustments of prior-year awards are not included in the totals.
2. These 10 percent set-aside amounts are for acid mine drainage set-aside funding rather than future set-aside funding.
3. Included in this category are costs for program support (personnel, budgeting, procurement, etc.), abandoned mine land inventory management, and program policy development. Indirect costs associated with the administration of the program may also be included.
4. The term "Project Costs" is now used instead of construction. Abandoned mine land simplified grants do not contain specific construction cost breakouts, but rather list all costs associated with a construction project as a project cost. This category contains non-water supply, water supply, and non-coal project costs, and includes \$3,200,000 in funding for Appalachian Clean Streams Program.
5. This category contains emergency project, administrative, and indirect costs.
6. Number of state abandoned mine reclamation program staff on June 30, 2005.

mine workers who retired on or before July 20, 1992, and their dependents. The Energy Policy Act authorizes a transfer of up to \$70 million per year in an amount equal to the interest earned on the AML fund not to exceed \$70 million to the Combined Benefit Fund to defray the costs related to health care for unassigned beneficiaries. Unassigned beneficiaries are those miners for whom no operating coal company is responsible. If, after a typical two-year cycle, the amount of the transfer was greater or less

than the actual health benefits, an adjustment is made to the next transfer. The 2005 annual payment was \$69 million for 16,502 beneficiaries. Prior year adjustments reduced this payment by \$2.5 million. The total payment in 2005 was just under \$66.5 million. Since 1992, when the Office of Surface Mining began investing Abandoned Mine Land funds, the cumulative investment earnings have been \$850.5 million. Cumulative transfers to the United Mine Workers of America Combined Benefit Fund,

including 2005, have been \$75 million, leaving an interest balance of \$6 million. Table 2 summarizes the Fund account for the past two years.

**Fee Collection**

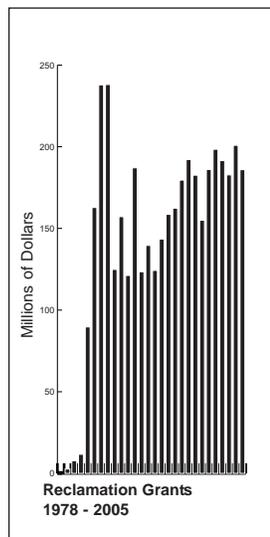
The Office of Surface Mining collects fees from coal mine operators through voluntary reporting, audit, and debt collection. In 2005, the rate of those reporting tonnage and paying the fees

that were due was 99.9 percent, resulting in total collections of \$293,604,230 for the Fund. To achieve that compliance rate, the Office of Surface Mining's integrated collection and audit functions focus on providing coal operators the information and assistance needed to comply. Experience has shown that a proactive, cooperative approach with industry reduces the time and costs required for all parties involved. Specific steps taken include: providing preprinted forms to all active coal mining companies on the e-filing website or by mail; contacting all new operators to offer compliance assistance; and providing guidance by mail, phone, and during audits.

Because of factors beyond the Office of Surface Mining's control, such as company financial difficulties and errors, some nonpayment and non-reporting will probably always be present. When such instances of noncompliance are found, auditors and collection staff examine each issue and determine how similar occurrences can be avoided in the future. The high compliance rate can be attributed to this proactive cooperative approach, and the overall efficiency of the collection and audit activities.

**Grants to States and Tribes**

Starting with Texas in 1980, the Office of



Surface Mining began approving state reclamation programs. Currently, 23 states have approved abandoned mine land reclamation programs:

- Alabama,
- Alaska,
- Arkansas,
- Colorado,
- Illinois,
- Indiana,
- Iowa,
- Kansas,
- Kentucky,
- Louisiana,
- Maryland,
- Missouri,
- Montana,
- New Mexico,
- North Dakota,
- Ohio,

Oklahoma, Pennsylvania, Texas, Utah, Virginia, West Virginia, and Wyoming. In addition, the Crow, Hopi, and Navajo Indian tribes have approved programs. In 2005, the states and tribes received grants totaling \$185,978,980 to carry out the emergency and non-emergency Abandoned Mine Land programs.

Since 1979, when the states began receiving abandoned mine land grants for their reclamation programs, \$3,728,784,966 has been distributed from the Fund. Grant obligations (the amount used by the states) for 2005 are shown in Table 3<sup>5</sup>.

**Minimum Program**

The minimum-level program was established by Congress in 1988 to ensure funding of existing high priority projects in states where the annual grant distribution is too small for the state to administer a program.

During 2005, Alaska, Arkansas, Iowa, Kansas, Maryland, Missouri, North Dakota, and Oklahoma were eligible for minimum-level program funding and received such grants during the year. Minimum-level program funding remained at \$1,500,000 for 2005. The eight eligible programs received a total of \$7,866,744 in 2005.

This funding supplements the formula-based grant and brings those eight states to the minimum-program level. Once minimum-program states or tribes complete their high priority projects listed in the National Abandoned Mine Land Inventory System, their annual grants are limited to state-share funds.

**State Set-Aside**

States are authorized to set aside up to 10 percent of the state-share and historic coal funds received annually into either of two special trust funds. Set-aside funds are deposited into a trust account and may be used, along with interest earned, for specific purposes. Beginning in 1987, Public Law 100-34 authorized states to deposit set-aside money into future trust funds which may be used to reclaim future abandoned mine land problems. In 1990, Public Law 101-508 created an acid mine drainage set-aside program. Funds from an acid mine drainage trust fund may be expended to implement an approved acid mine drainage abatement and treatment plan. In 2005, nine states set aside \$8,458,209. The Office of Surface Mining has granted a total of \$82,685,182 through 2005 to 16 states and three tribes for their set aside trust funds.

**Subsidence Insurance**

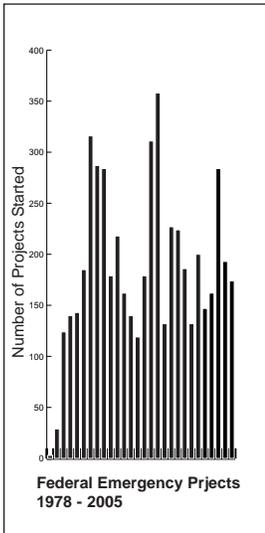
Public Law 98-473 authorized states and tribes with approved reclamation programs to use abandoned mine land funds to establish self-sustaining, individually administered programs to insure private property against damage caused by land subsidence resulting from abandoned underground coal mines. States receive a subsidence insurance grant of up to \$3,000,000, awarded from the state's share of the Abandoned Mine Land Fund.

In 2005, one subsidence insurance grant was issued to the state of Wyoming, for \$31,131. Through 2005, the Office of Surface Mining has granted a total of \$11,917,137 to Colorado, Indiana, Kentucky, Ohio, West Virginia, and Wyoming for this purpose.

**Emergency Program**

5. Differences between the total obligation (shown in Table 3) and the total distribution (shown in Table 1), result from previous year carry over or funding from past years distribution that were not used until 2005.

Emergency reclamation projects are those involving abandoned mine land problems that present a danger to public health, safety, or general welfare and that require immediate action to eliminate the problem.



Following passage of

the Surface Mining Law, the Office of Surface Mining performed all emergency reclamation; however, as programs were approved, many states took over administration of emergency programs. In 2005, the following states had emergency programs: Alabama, Alaska, Arkansas, Illinois, Indiana, Iowa, Kansas, Missouri, Montana, North Dakota, Ohio, Oklahoma, Virginia, and West Virginia. The Office of Surface Mining provides federal share funds to the states with state emergency programs to complete their emergency projects. The Office of Surface Mining is responsible for emergency projects in California, Colorado, Georgia, Kentucky, Louisiana, Maryland, Michigan, Mississippi, New Mexico, Pennsylvania, Rhode Island, Tennessee, Texas, Utah, Washington, and Wyoming, as well as on all tribal lands.

Investigations of potential emergency problems (called "complaint" investigations) are undertaken by state reclamation agencies or by the Office of Surface Mining. Potential emergency problems are referred to the states or the Office of Surface Mining from affected citizens, municipalities, emergency response agencies, and other state agencies. Information on how to report emergency problems can be found at [www.osmre.gov/amlemerg.htm](http://www.osmre.gov/amlemerg.htm). Following identification of a potential emergency problem, a technical investigation is performed, usually within 48 hours, and a

**Table 4  
Reclamation Projects Started**

	2005		Emergency 1978-2005		Total <sup>3</sup>	Non-Emergency 2005	
	Federal <sup>1</sup>	State <sup>2</sup>	Federal <sup>1</sup>	State <sup>2</sup>		Federal <sup>1</sup>	State <sup>2</sup>
Alabama	0	10	10	125	135	0	7
Alaska	0	0		1	1	0	2
Arkansas	0	2	1	22	23	0	3
California	0	0	5	0	5	0	0
Colorado	1	0	107	0	107	0	13
Crow	0	0	0	0	0	0	7
Georgia	0	0	0	0	0	0	0
Hopi	0	0	0	0	0	0	0
Illinois	0	15	51	278	329	0	12
Indiana	0	5	94	158	252	0	37
Iowa	0	2	22	3	25	0	4
Kansas	0	28	270	686	956	0	2
Kentucky	33	0	1,133	0	1,133	0	47
Louisiana	0	0	0	0	0	0	0
Maryland	0	0	0	0	0	0	0
Michigan	0	0	0	0	0	2	0
Mississippi	0	0	0	0	0	0	0
Missouri	0	1	6	6	12	0	5
Montana	0	0	7	14	21	0	3
Navajo	0	0	6	0	6	0	1
New Mexico	0	0	16	0	16	0	3
North Dakota	0	1	15	15	30	0	5
Northern Cheyenne	0	0	2	0	2	0	0
Ohio	0	38	190	327	517	0	32
Oklahoma	0	4	47	29	76	0	4
Pennsylvania	136	0	2,637	0	2,637	0	68
Rhode Island	1	0	4	0	4	0	0
Tennessee	1	1	20	1	21	2	2
Texas	0	0	6	0	6	0	1
Utah	0	0	0	0	0	0	3
Ute Reservation	0	0	1	0	1	0	0
Virginia	0	14	30	174	204	0	29
Washington	2	0	59	0	59	2	0
West Virginia	0	38	179	800	979	0	14
Wyoming	0	0	38	0	38	0	23
<b>Total</b>	<b>174</b>	<b>159</b>	<b>5,246</b>	<b>2,638</b>	<b>7,595</b>	<b>6</b>	<b>329</b>

1. Projects started in 2005 (October 1, 2004 - September 30, 2005).  
 2. Projects started during the period July 1, 2004 - June 30, 2005.  
 3. Includes projects started during both time periods.

determination made whether the site is eligible for emergency reclamation. Of the 1,452 potential emergencies referred to the states and Office of Surface Mining in 2005, 328 were determined to be emergencies, 1,002 were determined not to be of an emergency nature or not related to coal mining, and 30 were still under investigation on September 30, 2005. Problems which are not emergencies but are otherwise eligible for reclamation are

considered for funding as high priority projects.

During 2005, states obligated \$12.5 Million (see Table 3) and the Office of Surface Mining obligated \$8.0 million (see Table 5) for emergency reclamation projects. In 2005, the states and the Office of Surface Mining started 333 abandoned mine land emergency projects in 18 states

**Table 5  
Federal Reclamation Projects (Obligations)**

State or Tribe	Emergency	High Priority	Total 1978-2005 <sup>1</sup>
Alabama	\$0	\$0	\$13,934,015
Alaska	0	0	\$194,638
Arkansas	0	0	\$84,904
California	0	0	\$2,626,403
Colorado	0	0	\$2,185,202
Georgia	0	978	\$4,129,364
Illinois	0	0	\$5,376,749
Indiana	0	0	\$4,032,023
Iowa	0	0	\$1,438,442
Kansas	0	0	\$5,094,172
Kentucky	5,044,318	0	\$123,593,105
Maryland	27,185	0	\$3,132,966
Michigan	0	4,000	\$3,652,382
Missouri	0	0	\$8,015,909
Montana	0	0	\$729,058
New Mexico	0	0	\$2,366,041
North Carolina	0	0	\$205,407
North Dakota	0	0	\$1,723,933
Ohio	0	0	\$18,295,299
Oklahoma	0	0	\$1,232,159
Oregon	0	42,500	\$109,775
Pennsylvania	2,614,551	0	\$116,192,497
Rhode Island	13,248	0	\$569,477
South Dakota	0	14,296	\$196,892
Tennessee	143,828	1,000,000	\$26,760,441
Texas	0	0	\$289,849
Utah	0	0	\$123,791
Virginia	0	0	\$10,139,469
Washington	156,921	209,778	\$8,623,885
West Virginia	0	0	\$29,023,226
Wyoming	0	0	\$1,067,101
Cheyenne Rive Sioux Tribe	0	0	\$2,803,165
Crow Tribe	0	0	\$1,097,895
Fort Berthold Tribe	0	0	\$69,972
Fort Peck Tribe	0	0	\$147,991
Hopi Tribe	0	0	\$1,263,409
Jacarillo Apache Tribe	0	0	\$59,998
Navajo Tribe	0	0	\$2,222,792
Northern Cheyenne Tribe	0	10,000	\$595,044
Southern Ute Tribe	0	0	\$94,206
Rocky Boy Tribe	0	0	\$60,188
Uintah/Ouray Tribe	0	0	\$138,738
Ute Mountain Tribe	0	0	\$14,300
White Mountain Apache Tribe	0	0	\$1,838
Wind River Tribe	0	0	\$73,267
Zuni Tribe	0	0	\$125,009
Undistributed	0	0	\$580
<b>Total</b>	<b>\$8,000,050</b>	<b>\$1,281,552</b>	<b>\$403,906,966</b>

1. Includes prior year contract deobligations and upward adjustments.

(see Table 4). As in previous years, Pennsylvania and Kentucky had the most emergencies.

### Non-Emergency Program

Under Sections 402 and 407 of the Surface Mining Law, the Secretary of the Interior is authorized to expend Abandoned Mine Reclamation Fund monies for non-emergency reclamation of high priority problems that present an extreme danger or that affect the public health, safety and welfare. A non-emergency is defined as an abandoned mine land reclamation problem that meets one of the priorities of Section 403(a) or 411(c) or (f) in the Surface Mining Law. Until 1980, the Office of Surface Mining administered all non-emergency reclamation, but as the state and tribal reclamation programs were approved they took over responsibility for correcting abandoned mine land problems. States and tribes currently use 99 percent of non-emergency reclamation funds. The states and tribes initiated 329 non-emergency reclamation projects. The Office of Surface Mining, which continues to do projects in the states of

California, Georgia, Michigan, Oregon, South Dakota, Tennessee, and Washington, initiated six non-emergency projects.

The Abandoned Mine Reclamation Fund also is used to reclaim problems created by non-coal mines. To be eligible for funding, a non-coal project must be a Priority 1 (threat to health and safety), or the state or Indian tribe must certify it has addressed all known coal-related problems. Table 6 summarizes both emergency and non-emergency abandoned coal and non-coal mine reclamation project accomplishments through 2005.

### Post-Surface Mining Law Reclamation

As authorized by the 2005 Appropriations Act, Federal Civil Penalties collected under Section 518 of the Surface Mining Law were used to reclaim lands mined and abandoned after August 3, 1977. In 2005, the Office of Surface Mining funded two civil penalty projects in Alabama and Virginia costing a total of \$98,610.75. An additional \$71,568.87 in unobligated funds will be carried over for use in 2006 reclamation projects.

### Clean Streams Program

The Clean Streams Program began as the Appalachian Clean Streams Initiative in the fall of 1994. The Program supports local efforts to eliminate environmental and economic impacts of acid mine drainage from abandoned coal mines. The mission is to facilitate the efforts of citizen groups; university researchers; the coal industry; corporations; the environmental community; and local, state, and federal government agencies in cleaning streams polluted by acid mine drainage. The program is carried out by state abandoned mine reclamation programs and nonprofit organizations.

### Supplemental State Grants

## Office of Surface Mining

Eligible state programs are funded by the Office of Surface Mining to address acid mine drainage problems. These grants act as “seed money” to encourage other organizations to contribute funding for the projects. During 2005, the Office of Surface Mining provided 11 states with \$3.2 million. Since 1994 when the supplemental state grants began, the Office of Surface Mining has provided \$47 million for 158 projects, 119 have been completed (see Figure 1), and outside funding grew to over \$23 million on the projects

A recent successful Clean Streams Program project is the Keystone State Park Acid Mine Drainage Abatement Project located in Keystone, Pennsylvania. The project was completed Dec. 9, 2004, at a cost of \$237,465. Phase 1, work completed in 2002, dewatered a mine pool, removed a mine seal, and replaced a mine drainage collection system that had frequently plugged and threatened to damage recreational facilities at the state park. Phase 2 involved the construction of a passive treatment system to eliminate the polluted water discharge. The treatment system consists of an innovative limestone-upflow unit with an automatic siphon to backflush the unit and remove metal precipitates. The treatment system is in operation and is restoring water quality to 1.2 miles of McCune Run, a

tributary of Loyalhanna Creek. The water treatment system is located on Keystone State Park property and is being incorporated into the park’s environmental education program.

### *Watershed Cooperative Agreements*

In 1999, the Office of Surface Mining began the Watershed Cooperative Agreement Program as part of the Clean Streams Program. The purpose was to assist local not-for-profit organizations, especially small local watershed groups, through cooperative agreements as the funding mechanism for acid mine drainage remediation. One of the criteria to qualify as an Office of Surface Mining recipient for funding is for the watershed organizations to have other partners contributing either funding or in-kind services.

Since the program began in 1999, the Office of Surface Mining has awarded 141 cooperative agreements and amendments at a cost of \$12,468,665, and 59 projects have been completed. During 2005, 23 cooperative agreements and two amendments

**Figure 2**

### Watershed Cooperative Agreements

Project/Organization      Grant Amount

<b>Illinois</b>	
Carterville High School	38,603.80
Shawnee Resource Conservation and Development	
<b>Kansas</b>	
Slurry Containment Project	100,000.00
See-Kan Resource Conservation and Development	
<b>Maryland</b>	
Brophytown AMD Remediation Project	51,760.00
Georges Creek Watershed Association	
Shallmar Doser Project	100,000.00
Western Maryland R C & D	
Getson Steel Slag Leach Bed Project	25,360.00
Georges Creek Watershed Association	
Kempton Doser Enhancement Project	100,000.00
Western Maryland RC&D	
<b>Ohio</b>	
Flint Run East	150,000.00
Raccoon Creek Improvement Committee/Ohio Valley RC&D	
Mineral/Zoar AMD Project	112,035.00
Crossroads Conservation Resource & Development Council	
Fern Hill Pits	74,544.00
Huff Run Watershed Restoration Partnership	
Lake Milton AML Project	100,000.00
Ohio Valley Resource Conservation & Development	
<b>Pennsylvania</b>	
Wells Creek Moore #7 Project <sup>1</sup>	25,000.00
Southern Alleghenies Conservancy	
Reevesdale South Dip Tunnel Project	100,000.00
Schuylkill Headwaters Association	
Pine Forest Project	125,000.00
Schuylkill Headwaters Association	
Audenreid Tunnel Discharge	150,000.00
Eastern Penna. Coalition for Abandoned Mine Reclamation	
Bear Creek Project	69,614.00
Eastern Penna. Coalition for Abandoned Mine Reclamation	
Minersville AMD Remediation	48,000.00
Southern Alleghenies Conservancy	
<b>Tennessee</b>	
Thompson Creek Project Number 1 of Big Creek	125,000.00
Cumberland Mountain Resource Conservation & Development	
<b>West Virginia</b>	
Sovern Run - Clark Property AMD Project	77,014.00
Friends of the Cheat	
Titchenell Property on Sovern Run	76,694.36
Friends of the Cheat	
Lambert Run - Muzzle Loader Club AMD Project	78,489.00
Guardians of the West Fork	
Long Branch AMD Project	117,796.90
Lower Paint Creek Association, Inc.	
Lower Mudlick AMD Remediation Project	99,386.00
Buckhannon River Watershed Organization, Inc.	
Opossum Hollow AMD Remediation Project <sup>1</sup>	900.00
Morris Creek Watershed Association	
Nixon Run AMD Remediation Project (Phase II)	99,602.00
Lower West Fork Watershed Association	
Valley Point #12 AMD Remediation Project	93,804.74
Friends of Deckers Creek	
<b>Total</b>	<b>\$2,138,603.80</b>

<sup>1</sup>. Amendments to existing cooperative agreements.

**Figure 1**  
**Clean Streams Program Projects**

	Supplemental State Grants		Watershed Agreements	
	Started in 2005	Completed Since 1994	Started in 2005	Completed Since 1999
Alabama	0	8	0	1
Illinois	1	4	0	0
Indiana	1	22	0	2
Iowa	7	6	0	0
Kentucky	2	12	0	0
Maryland	1	11	1	9
Missouri	0	0	4	0
Ohio	19	17	13	8
Oklahoma	1	1	3	0
Pennsylvania	4	25	5	28
Virginia	0	2	0	2
West Virginia	3	11	4	9
<b>Total</b>	<b>39</b>	<b>119</b>	<b>30</b>	<b>59</b>

**Table 6**  
**1978-2005 Abandoned Mine Land Reclamation Accomplishments**  
 Priority 1 and 2 (Protection of Public Health, Safety and General Welfare) and Emergency Projects<sup>7</sup>

	Clogged Stream <sup>1</sup>	Clogged Stream Land <sup>2</sup>	Dangerous Highwalls <sup>3</sup>	Dangerous Impoundment <sup>4</sup>	Dangerous Pile & Embankment <sup>2</sup>	Dangerous Slide <sup>2</sup>	Dangerous Gas <sup>1</sup>	Hazardous Equipment & Facilities <sup>2</sup>	Hazardous Water Body <sup>1</sup>	Industrial/Residential Waste <sup>2</sup>	Portal <sup>1</sup>	Polluted Water: Agricultural & Industrial <sup>1</sup>	Polluted Water: Human Consumer <sup>1</sup>	Subsidence <sup>2</sup>	Surface Burning <sup>2</sup>	Underground Mine Fire <sup>2</sup>	Vertical Opening <sup>1</sup>
Alaska	0	0	11,190	4	6	0	0	1,472	2	4	30	0	0	0	21	0	38
Alabama	1	198	265,662	1	1,461	20	0	470	82	25	1,037	8	14	36	68	0	390
Arkansas	1	0	64,431	1	753	0	0	2	78	30	28	0	0	13	4	0	112
California	0	0	0	0	0	0	0	0	0	0	34	0	0	1	0	0	42
CERT Tribes*	0	0	7,052	0	472	0	0	6	30	9	74	0	0	35	0	0	18
Colorado	0	0	51,992	0	41	0	0	14	0	10	2,820	3	0	51	30	183	3,732
Crow Tribe	0	1	2,267	1	58	23	0	32	1	0	15	3	0	16	0	0	5
Georgia	0	0	11,450	2	3	0	0	0	0	0	112	0	1	0	0	0	11
Hopi Tribe	0	0	11,662	0	0	0	0	8	0	0	9	0	0	0	0	0	2
Iowa	8	659	60,390	3	829	0	0	5	24	13	1	12	2	3	0	0	20
Idaho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Illinois	21	1,290	54,886	7	308	3	22	352	9	72	193	11	1	94	115	0	1,205
Indiana	14	176	123,772	6	623	7	3	98	7	32	68	15	7	192	15	1	348
Kansas	1	9	142,945	1	111	3	0	2	1	28	0	3	0	23	9	0	1,116
Kentucky	45	8,825	27,288	115	448	2,074	0	220	42	27	1,918	6	9,568	50	225	58	144
Maryland	5	68	43,130	3	224	68	0	25	20	35	41	85	44	15	1	2	5
Michigan	0	0	950	0	0	0	0	7	2	0	0	0	1	0	8	0	50
Missouri	11	1,514	73,702	6	572	0	0	28	11	71	35	34	15	6	19	7	180
Montana	20	94	25,560	3	174	1	1	244	1	401	1,098	17	12	494	302	69	622
Navajo Nation	0	1	109,586	4	665	7	0	5	0	6	871	19	0	12	3	0	381
North Carolina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
North Dakota	0	0	78,099	4	317	35	0	14	18	2	13	6	0	1,410	17	0	108
New Mexico	0	2	280	0	10	0	0	17	0	0	478	4	1	35	35	32	900
Ohio	38	5,532	66,204	7	96	417	4	53	11	34	358	53	241	128	97	3	243
Oklahoma	15	1	240,103	0	0	0	0	15	199	7	172	6	3	13	0	0	111
Oregon	0	0	0	0	0	0	0	3	0	0	12	0	0	0	0	0	3
Pennsylvania	103	220	853,950	667	582	63	0	333	123	40	289	27	211	2,458	123	1,024	535
Rhode Island	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0
South Dakota	0	0	135	0	0	0	0	4	0	0	5	0	0	1	0	0	1
Tennessee	2	147	49,970	3	533	68	0	31	60	14	192	7	14	6	28	0	11
Texas	0	0	52,665	0	1,461	0	0	0	17	0	66	0	0	17	0	0	358
Utah	14	9	3,925	1	390	3	19	221	2	0	3,060	3	0	184	43	29	1,162
Virginia	75	858	28,050	47	260	304	0	221	2	2	996	0	1,778	13	51	0	105
Washington	0	0	0	0	3	0	0	7	0	0	30	0	0	12	15	0	85
West Virginia	51	167	198,122	643	4,664	549	5	588	7	37	2,354	65	11,082	373	470	28	149
Wyoming	114	1,634	516,096	138	2,051	25	0	181	371	29	518	3	0	1,150	12	41	568
<b>Total</b>	<b>539</b>	<b>21,404</b>	<b>3,175,514</b>	<b>1,667</b>	<b>17,111</b>	<b>3,668</b>	<b>54</b>	<b>4,678</b>	<b>1,119</b>	<b>927</b>	<b>16,927</b>	<b>390</b>	<b>22,995</b>	<b>6,846</b>	<b>1,708</b>	<b>1,477</b>	<b>12,765</b>

**Table 6 Continued**  
**1978-2005 Abandoned Mine Land Reclamation Accomplishments**  
 Priority 3 (Environmental Restoration)<sup>7</sup>

	Bench <sup>2</sup>	Industrial/Residential Waste <sup>2</sup>	Equipment/Facility <sup>4</sup>	Gal <sup>2</sup>	Highwalls <sup>3</sup>	Haul Road <sup>2</sup>	Mine Opening <sup>4</sup>	Pit <sup>2</sup>	Spoil Area <sup>2</sup>	Slur <sup>2</sup>	Slump <sup>2</sup>	Water Problem <sup>5</sup>
Alaska	0	0	0	7	0	0	0	0	47	0	9	0
Alabama	23	16	8	216	32,435	2	50	0	9,646	5	11	379
Arkansas	0	0	0	0	0	0	0	0	86	0	0	0
CERT Tribes*	0	0	2	4	1,500	0	1	7	80	0	0	0
California	0	0	0	2	0	0	0	0	0	0	0	50
Colorado	3	6	7	162	2,028	0	18	131	832	0	0	1
Crow	6	0	0	35	2,245	12	2	32	27	0	4	0
Georgia	3	0	0	3	400	0	0	3	7	0	0	0
Hopi Tribe	0	0	0	25	51	15	0	10	10	0	0	0
Iowa	0	2	0	1	2,900	5	1	21	440	0	0	0
Illinois	1	6	160	2,553	10,880	210	67	623	1,875	1,112	1	2,896
Indiana	0	108	183	1,447	14,951	227	27	388	1,981	1,053	3	5,105,418
Kansas	0	0	1	89	3,200	0	0	23	316	10	0	0
Kentucky	580	0	61	227	2,240	0	69	4	832	66	5	60
Maryland	10	1	2	46	5,335	2	8	22	263	0	1	208
Michigan	0	0	1	27	0	1	0	1	10	0	11	0
Missouri	0	5	5	148	20,324	1	0	96	1,378	69	0	86
Montana	1	89	58	147	1,170	1	230	34	870	0	19	2,741
Navajo Nation	41	1	2	141	890	203	79	163	265	0	0	3
North Dakota	0	0	0	0	0	0	0	0	0	0	0	0
New Mexico	3	0	29	75	0	10	29	2	332	2	0	0
Ohio	0	0	3	182	9,620	0	19	18	418	0	0	100
Oklahoma	0	0	0	0	0	0	0	0	0	0	0	0
Oregon	0	0	0	0	0	0	1	0	0	0	0	0
Pennsylvania	0	0	25	54	7,658	0	22	73	2,500	1	26	94,465
Tennessee	76	1	15	67	2,230	8	3	105	553	0	4	360
Texas	0	0	0	8	0	0	0	0	552	0	0	0
Utah	4	7	64	268	550	3	0	8	55	1	16	20
Virginia	0	1	25	21	13,000	1	52	0	12	0	0	120
West Virginia	0	0	3	75	33,141	0	4	5	217	2	0	622
Wyoming	0	0	0	39	0	91	0	7,137	8,116	199	0	0
<b>Total</b>	<b>750</b>	<b>243</b>	<b>654</b>	<b>6,069</b>	<b>166,748</b>	<b>791</b>	<b>682</b>	<b>8,905</b>	<b>31,719</b>	<b>2,520</b>	<b>109</b>	<b>5,207,529</b>

1. Miles  
 2. Acres  
 3. Feet  
 4. Count (Number of occurrences)  
 5. Gallons/minute.  
 6. CERT is the Council of Energy Resources Tribes which includes: Blackfeet; Cheyenne River Sioux; Fort Berthold (Mandan, Hidatsa, and Arikara); Fort Peck (Assiniboin and Sioux); Northern Cheyenne; Jicarilla Apache, Laguna Pueblo; Rocky Boys (Chippewa and Cree); San Carlos Apache; Southern Ute, Ute Mountain Ute; White Mountain Apache; and Wind River (Arapaho and Shoshone).  
 7. These statistics do not include Office of Surface Mining emergency project accomplishments.

Tree planting efforts at this reclaimed western Kentucky mine operation began voluntarily in 1948, before there were reclamation requirements, and have continued to the present day. Company foresters and soil scientists recognized the long-term environmental and economic benefits of forest lands and began planting trees on the reclaimed mine land. After years of growth the forests reestablished on reclaimed land are difficult to distinguish from native forests on nearby unmined land.

to existing agreements were awarded for a total of \$2,138,603 (see Figure 2).

Agreements are normally limited to a maximum of \$100,000 and are used primarily for the construction phase of the projects; however, administrative costs associated with completion of a project are also allowable.

Significant on-the-ground improvement has been made by these watershed projects. For example, On June 20, 2005, the Mountain Watershed Association, partners and friends dedicated the Permapress Mine Drainage Treatment Facility. This site is located in the Indian Creek Watershed of Fayette County, Pennsylvania. Here, a 35gpm discharge of water from an abandoned underground mine is being treated through the use of a limestone flushing bed complete with a large automatic siphon, which drains the bed every 36 hours. The water then flows through a settling pond where the aluminum precipitate is collected. About 1 mile of Indian Creek is cleaned up by this project. The mine water is very low in dissolved iron, but has 23mg/l of dissolved aluminum. The primary financial partner in this \$230,000 project is the Agriculture Department's, Natural



Resources Conservation Service, which contributed funds from its Public Law 566 Watershed Restoration Program. The Office of Surface Mining also contributed \$8,000 from the Watershed Cooperative Agreement Program to assist Mountain Watershed Association with contract oversight. The Western Pennsylvania Watershed Program was also a financial partner. This is the third mine drainage treatment project in the Indian Creek Watershed and the Office of Surface Mining has contributed Watershed Cooperative Agreement funds to all projects. There are several other discharges identified for future

recreational and fishery benefits of the watershed. The Pennsylvania Department of Environmental Protection's Bureau of Abandoned Mine Reclamation is also providing significant technical and financial assistance to acid mine drainage projects in the watershed.

**Watershed Internship Program**

The Office of Surface Mining and the Environmental Protection Agency initiated the Summer Watershed Internship program in 1999, and in 2005, funded 22 interns in eight states. Since the program began, 168 interns have been placed in ten states (see Figure 3) all of them working directly for watershed groups on acid mine drainage issues.

construction, and the 566 watershed plan developed by the Natural Resources Conservation Service identified ten acid mine drainage sites that have a significant impact on Indian Creek. Treatment of these sites will remove 95 percent of the mine drainage pollutants entering Indian Creek, and will restore the

The internship program enables undergraduate college students to bring technical expertise and youthful energy to volunteer watershed organizations. Each intern spends a semester working in a watershed. In 2005, Office of Surface Mining funding provided a \$2,000 stipend and \$500 for project

**Figure 3**  
**Number of Watershed Interns**

State	2005	2004	2003	2002	2001	2000	1999
Alabama	1	1	1	1	0	3	0
Kentucky	0	0	0	0	1	2	0
Maryland	2	2	1	2	2	1	0
Ohio	2	1	5	4	3	2	1
Pennsylvania	5	7	9	8	12	5	3
Tennessee	4	3	1	3	1	3	1
Virginia	1	1	3	3	2	1	0
West Virginia	6	8	6	9	11	6	4
Indiana	0	0	0	1	1	0	1
Oklahoma	1	0	0	0	0	0	0
<b>Total</b>	<b>22</b>	<b>23</b>	<b>26</b>	<b>31</b>	<b>33</b>	<b>23</b>	<b>10</b>



expenses to each intern. In every case, the interns strengthened the capacity of the sponsoring watershed group, adding to their monitoring data, developing watershed plans, and building public awareness.

**Office of Surface Mining/VISTA Initiative**

The Office of Surface Mining and AmeriCorps/VISTA are working together to place full-time VISTA staff in coal-impacted watersheds across coal country. These VISTA positions are funded by the national VISTA program and include a three-year commitment to the sponsoring watershed group. The Office of Surface Mining provides a cooperative agreement of \$5,000 for administrative support during the first year a program is in operation and coordinates the activities.

In 2005, the Office of Surface Mining/VISTA watershed development team is 26 watersheds strong, serving volunteer groups in eight states from Pennsylvania to Alabama. These full-time positions (and the dedicated individuals that fill those positions) are building critical capacity in the volunteer group they serve -- bringing new awareness and expertise to address acid mine drainage; building strong partnerships with state agencies, other federal agencies, and nonprofit foundations; creating a base of community volunteer support within their watersheds for environmental improvement; and raising the money needed to support this work. In the last 18 months, the team enlisted over 3,000 volunteers who worked more than 50,000 hours. During the same period, these volunteers built collaborative partnerships that created over four million dollars in documented in-kind donations and raised more than one

Grazing is one of the most important land uses in the West, and at this reclaimed Montana mine site the land has been returned to its pre-mining grazing land use. Native plants were used to reestablish this vegetation, and monitoring shows the levels of cover and production to be equal to or better than native vegetation adjacent to the reclaimed site.

million dollars in cash grants. The watershed development team is creating a solid base of environmental stewardship in watersheds across the states that are part of the Office of Surface Mining Clean Streams Program, thus building a future for environmental conservation and improvement across the region.

**Inventory of Abandoned Mine Land Problems**

The Surface Mining Law, as amended by the Abandoned Mine Reclamation Act of 1990 (Public Law 101-508), requires the Office of Surface Mining to maintain an inventory of eligible abandoned coal mine lands that meet the public health, safety, and general welfare criteria of Section 403(a)(1) and (2). This inventory is maintained and updated to reflect reclamation accomplishments as required by Section 403(c).

The Office of Surface Mining maintains its inventory on a computer system, which is accessible from the web at [www.osmre.gov/aml/inven/zintroin.htm](http://www.osmre.gov/aml/inven/zintroin.htm). The system creates reports on abandoned mine land accomplishments and problems that still require reclamation. This was the 11th year the states and Indian tribes managed their own data, entering it electronically into the Office of Surface Mining's inventory

**Figure 4  
Inventory Costs<sup>1</sup>**

Completed	\$2.3 billion	20.5 percent
Funded	0.2 billion	2.2 percent
Unreclaimed	8.7 billion	77.7 percent
<b>Total</b>	<b>\$11.2 billion</b>	<b>100.0 percent</b>

1. Includes priority 1, 2, and 3 coal and non-coal costs

system. In 2005, this process resulted in 1,152 records added, 4,883 modified, and 730 deleted.

As of September 30, 2005, the system contained information for 18,732 problem areas, mostly related to abandoned coal mines. (A problem area is a geographic area that contains one or more abandoned mine problems. Problem area boundaries are determined by the extent of the effect of the abandoned mine problem on surrounding land and water, not just the abandoned mine sites.)

The Abandoned Mine Land Reclamation Program is one of the Nation's most successful environmental restoration programs, with over \$1.7 billion worth of coal-related high priority problems reclaimed. However, many projects have yet to be funded. The inventory of unfunded coal-related problems is reduced each year by state, Indian tribe, and federal reclamation projects. Unfortunately, new problems continued to arise as development expands into old coal mining areas and as subsidence and mine fires occur. As of September 30, 2005, the inventory system shows \$8.7 billion of unreclaimed problems (see Figure 4).

### **Reclamation Awards**

Since 1977, abandoned mine land reclamation funded under the Surface Mining Law has eliminated thousands of dangerous health and safety problems resulting from abandoned mines throughout the country. Yet, despite the country's significant progress in eliminating abandoned mine land problems, there is little public awareness that this reclamation has taken place. When there are highly visible scars at an unreclaimed landscape, most people recognize the legacy of past coal mining. But, after abandoned mine problems are eliminated and reclamation is complete, it is nearly impossible for any observer to see that health and safety problems once existed on the site. Ironically, the better the reclamation, the less apparent it is. Thus, the best reclamation is virtually invisible.

To give well-earned public recognition to those responsible for the nation's most outstanding achievements in abandoned mine land reclamation, the Office of Surface Mining began the annual Abandoned Mine Land Reclamation Awards Program in 1992. The Program publicly recognizes outstanding abandoned mine land reclamation and publicizes exemplary reclamation techniques.

The process used to select the winners includes judging by those most closely involved with reclamation projects - state and federal reclamation program staff. Each state/tribal Abandoned Mine Land Program selects the best project within its state/tribal boundary. Nominations are posted on the Internet and using an electronic ballot, each director from state/tribal Abandoned Mine Land Programs and Office of Surface Mining Field Offices selected the winning reclamation by ranking the nominations. Four award winners are selected using this process - three regional and one national. The nominations receiving the best score in each of the three coal regions are selected as "Regional Winners." The regional winner with the best score is selected the "National Winner." In addition, the public selects one project they think is best and the project receiving the most votes becomes the winner of the People's Choice Award. In 2005 the awards were presented at the annual meeting of the National Association of Abandoned Mine Land Programs. Winners of the 2005 awards were:

### ***Appalachian Regional, National, and***

### ***People's Choice Awards***

*Kentucky Division of Abandoned Mine Lands  
Spewing Camp Branch Refuse AML  
Project*

Floyd County, Kentucky

From 1952 to 1973, the Island Creek Coal company deposited more than 7 million tons of refuse from its preparation facility into a hollow known as Spewing Camp Branch. The refuse pile was almost a half mile long, 1,000 feet across, and up to 165 feet deep. The site was abandoned in 1981, and there were overwhelming erosion problems. In addition there was frequent downstream flooding and streams were polluted with acid mine drainage.

Reclamation began in October 2002.

Cover material from adjacent areas and two nearby projects was spread to a depth of two feet. Benches were cut into the fill at 30-foot vertical intervals, and side drains were constructed. After almost two years and \$3.5 million, the aesthetic blight and safety hazards have been eliminated.

### ***Mid-Continent Regional Award***

*Indiana Division of Reclamation  
AML Site 380, Sugar Ridge Fish and  
Wildlife Area  
Winslow, Indiana*

The Sugar Ridge Fish and Wildlife Area includes over 8,000 acres of mostly reclaimed surface mine land. Reclamation involved consolidating and burying the coal refuse. The drainage was redirected through constructed channels, and pit bottoms were covered. Passive treatment and wildlife wetlands were built, and all disturbed areas were revegetated. An abandoned mine land area has been restored. The land is once again productive, the water quality improved, and a useful public area has been created.

### ***Western Regional Award***

## Office of Surface Mining

*Colorado Inactive Mine Reclamation Program*  
Mesa State College/Environmental  
Restoration Education Project  
Grand Junction, Colorado

This Colorado project was carried out in cooperation with Mesa State College. It provided educational outreach, and reclamation design and implementation, and was accomplished for a substantially reduced cost. Five students completed a real-world project--from site inventory through final closure of the abandoned

mine openings. Four hazardous uranium mine openings were sealed, three of them with bat gates while maintaining the historical character of the sites.

Not only have dangerous mine openings been closed; but, five college students are now experienced with real-world abandoned mine land reclamation.

Small family cemeteries are common on mine sites. To protect them, the Surface Mining Law requires that mining be kept at least 100 feet from all cemeteries. On this site in eastern Kentucky, mining was completed leaving an unmined area surrounding this small community cemetery. As the mine site adjacent to the cemetery was reclaimed, the backfill was graded to provide the premining slope that allows easy access from all sides of the cemetery. In addition, this operator went beyond the requirements of the Law by constructing a gravel lane between the county road and the cemetery to facilitate easy access for local citizens.

